



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,976	09/09/2003	Kuldipsingh A. Pabla	5681-08300	4139
58467 MHKG/SUN P.O. BOX 398 AUSTIN, TX 78767	7590 05/21/2009		EXAMINER HOANG, HIEU T	
			ART UNIT 2452	PAPER NUMBER
		NOTIFICATION DATE 05/21/2009	DELIVERY MODE ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent_docketing@intprop.com
ptomhkkg@gmail.com

Office Action Summary	Application No. 10/657,976	Applicant(s) PABLA ET AL.
	Examiner HIEU T. HOANG	Art Unit 2452

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 April 2009.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-35 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/23/2009 has been entered.
2. Claims 1-35 are pending.

Response to Arguments

3. Applicant's arguments have been fully considered but are unpersuasive.
4. Applicant argues that Burbeck teaches away from the use of JXTA system of Krishnan. This argument is traversed. [0007] of Burbeck is the section mentioning JXTA, and clearly does not disparage in any way the use of using separate advertisement messages for each content, and therefore does not teach away from the using separate advertisement messages for each content. See *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004) [However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...."].
5. Applicant argues that it would not be obvious to modify Burbeck's publishing all contents in an advertise message to separate advertisements each corresponds to a single content. The examiner respectfully disagrees. Krishnan clearly teaches that each

advertisement corresponds to one codat or content (page 5, Codats and Advertisements, codats are read as contents; each advertisement corresponds to a codat) which is a specific one of the plurality of codats or contents, and therefore enabling requesting a specific content (page 5, Codats and Advertisements, a codat can be published and discovered). It would be obvious to one skilled in the art at the time of the invention to advertising contents in separate advertisements instead of using one message as taught by Burbeck. The motivation would be to advertise each content separately so that the publisher can advertise any content it wants in an advertisement (Krishnan, p. 5, advertisements). Furthermore, when the publisher has only a single content to be advertised, according to Burbeck, it sends out one advertisement having the single content, reading on the claimed language.

6. Applicant argues that the prior art does not teach discovery and requesting of published advertisements on the network from the rendezvous peer node. In traversal, Krishnan clearly teaches a rendezvous peer can help peers discover other peers and resources in the network using cached advertisements from the other peers (p. 5, rendezvous peers, p. 6, PDP, peer discovery protocol). Applicant argues that using rendezvous nodes in Burbeck would change the principle of operation of Burbeck. This is unpersuasive. Burbeck clearly teaches a peer can request and receive content and cache the received content and advertisement of the content in its local repository. Burbeck just does not explicitly state that the peer is a rendezvous node. but a rendezvous node is a known concept in JXTA, serving the same purpose of caching

advertisements and helping other peers discover the peers and resources in the network.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burbeck et al. (US 2003/0217139, hereafter Burbeck), in view of Krishnan (The JXTA solution to P2P).

9. For claim 1, Burbeck discloses a system, comprising:

- A plurality of devices implementing a plurality of peer nodes coupled to a network (abstract, peers in a peer-to-peer network), wherein each of the plurality of devices implements at least one peer node ([0043], peer devices);
- at least one of the plurality of peer nodes, wherein each of the at least one of the plurality of peer nodes is configured as a publisher peer node for a plurality of contents cached on the respective peer node, wherein each publisher peer node is configured to publish one or more advertisements on the network, wherein each advertisement corresponds the contents cached on the peer node ([0023],

lines 1-3, a peer node publishes advertisements what content the node holds), and wherein each advertisement includes information for requesting the specific corresponding content ([0111] lines 18-25, the alive message or advertisement contains includes call back information, [0112], [0113], file sharing); and

- lines 1-3, a peer node publishes advertisements what content the node holds), and wherein each advertisement includes information for requesting the specific corresponding content ([0111] lines 18-25, the alive message or advertisement contains includes call back information, [0112], [0113], file sharing); and
 - at least a subset of the plurality of peer nodes, wherein each peer node in the subset is configured to receive published advertisements on the network and request one or more specific contents corresponding to the received advertisements in accordance with the information included in the advertisements ([0023] lines 3-5, nodes receiving the advertisement can request content according to the advertisement);
 - wherein a publisher peer node that caches a content corresponding to a received advertisement is configured to provide the content corresponding to the received advertisement to a requesting peer node ([0023] lines 6-8, node receiving the advertisement can request and receive a particular content from the published node) in response to a request for the content from the requesting peer node ([0023], lines 4-5, request for a particular content from requesting node); and
 - wherein the requesting peer node is configured to cache the content ([0023] lines 8-10, requesting node caches received content) and become an additional content publisher peer node for the content corresponding to the discovered advertisement ([0118] lines 1-9, receiving peers further forwarding advertisement to other peers).

Burbeck does not explicitly disclose:

- each advertisement corresponds to a specific one of the plurality of contents, and requesting a specific content;
- wherein to publish the one or more advertisements on the network the publisher peer node is configured to send the one or more advertisement to a rendezvous peer node, wherein the rendezvous peer node caches the one or more advertisements;
- peer nodes discover published advertisements on the network from the rendezvous peer node by accessing the rendezvous peer node;

However, Krishnan discloses and/or suggests:

- each advertisement corresponds to one codat (page 5, Codats and Advertisements, codats are read as contents; each advertisement corresponds to a codat) which is a specific one of the plurality of codats or contents, and therefore enabling requesting a specific content (page 5, Codats and Advertisements, a codat can be published and discovered);
- wherein to publish the one or more advertisements on the network the publisher peer node is configured to send the one or more advertisement to a rendezvous peer node, wherein the rendezvous peer node caches the one or more advertisements (p.5, rendezvous peers, which cache advertisements);
- peer nodes discover published advertisements on the network from the rendezvous peer node by accessing the rendezvous peer node (p.5, rendezvous peers, which cache advertisements of known publishers and help peers discover other peers and forward discovery requests to other rendezvous peers);

Art Unit: 2452

It would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck and Krishnan to discover advertisements through rendezvous nodes because rendezvous peer nodes can help peers discover other peers efficiently in the network and forward discovery requests to other rendezvous peers (Krishnan, p.5, rendezvous peers).

10. For claims 6, 7, Burbeck-Krishnan further discloses the at least a subset of the plurality of peer nodes are member peers in a peer group (Krishnan, p. 4 and 5, peer groups), participate in a peer-to-peer networking environment implemented in accordance with one or more peer-to-peer platform protocols for enabling peer nodes to discover each other, communicate with each other, and cooperate with each other to form peer groups and share network resources in the peer-to-peer environment (Krishnan, p. 6, peer to peer protocols).

11. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burbeck in view of Teodosiu et al. (US 2002/0107982, hereafter Teodosiu).

12. For claim 12, Burbeck discloses a system, comprising:
a primary content publisher peer node configured to cache user-requestable contents and publish the cached contents for access by other peer nodes on a network ([0023], lines 1-3, a peer node publishes advertisements what contents the node holds);

an edge content publisher peer node configured to receive a plurality of the user-requestable contents from the primary content publisher peer node; cache the received plurality of contents ([0023] lines 8-10, requesting peer which caches received content is an edge peer node, a plurality of contents can be cached).

Burbeck does not explicitly disclose:

the edge content publisher publish the received plurality of contents for access for access by one or more of the other peer nodes on the network;

for which the edge content publisher peer node is logically nearer to the one or more of the other peer nodes than the primary content publisher peer node such that communications over the network between the edge content publisher peer node and the other peer node take less time than communications over the network between the primary content publisher peer node and the other peer node regardless of physical proximity.

However, Teodosiu discloses:

the edge content publisher configured to publish the received plurality of contents for access for access by one or more of the other peer nodes on the network ([0037], [0042], caching publishers cache the accessed resource and make it available to other peers to access);

for which the edge content publisher peer node is logically nearer to the one or more of the other peer nodes than the primary content publisher peer node such that communications over the network between the edge content publisher peer node and the other peer node take less time than communications over the network between the

primary content publisher peer node and the other peer node regardless of physical proximity ([0047], edge content publisher is a caching publisher proximal in terms of network distance to the requesting node, [0033], best response time by network speed).

It would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck and Teodosiu to identify a closer content providing node that caches content so that content can be provided from the closer node in order to optimize network traffic (Teodosiu, [0047]).

13. For claim 13, the claim is rejected for the same rationale as in claim 2.
14. For claim 14, the claim is rejected for the same rationale as in claim 3.

15. Claims 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burbeck, Teodosiu, further in view of Krishnan.
16. For claims 16 and 17, Burbeck-Teodosiu does not explicitly disclose the at least a subset of the plurality of peer nodes are member peers in a peer group, participate in a peer-to-peer networking environment implemented in accordance with one or more peer-to-peer platform protocols for enabling peer nodes to discover each other, communicate with each other, and cooperate with each other to form peer groups and share network resources in the peer-to-peer environment.

However, Krishnan discloses the same (p. 4 and 5, peer groups; p. 6, peer to peer protocols)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck, Teodosiu and Krishnan in order to provide various services such as sharing, messaging, and chat and collaboration in a peer group.

17. Claims 2, 3, 5, 8-11, 18-23, 25-27, 28-31, 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burbeck, in view of Krishnan, and Teodosiu.

18. For claim 20, Burbeck discloses a method, comprising:

- a content publisher peer node caching user requestable content and publishing the cached user requestable contents for access by other peer nodes on a network ([0023], lines 1-3, a peer node publishes advertisements what content the node holds to other peers);
- one of the other peer nodes requesting a particular content on the network in response to a user request for the particular content ([0023] lines 3-5, nodes receiving the advertisement can request the content resource according to the advertisement, [0124], user requests); receiving the particular content from the content publisher peer node; caching the received particular content ([0023] lines 8-10, requesting node caches received content).

Burbeck does not explicitly disclose: a plurality of separately user-requestable contents;
However, Krishnan discloses the same (page 5, codats, or contents;
advertisements, each advertisement message corresponds to a particular content)

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Burbeck and Krishnan to cache content at a node separately so that content can be advertised separately and provided more efficiently upon request.

Burbeck-Krishnan does not explicitly disclose: publishing the received particular content for access by the other peer nodes on the network;

However, Teodosiu discloses publishing the received particular content for access by the other peer nodes on the network ([0037] l. 14-18, [0042], making accessed content available for access by other peer nodes, caching publishers or dedicated peers cache and make available content)

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Burbeck, Krishnan and Teodosiu to allow peers that received a content to make content available for access by other peers to make the system more persistent and reliable for a huge volumes of requests (Teodosiu, [0042])

19. For claim 28, the claim is rejected for the same rationale as in claim 20.
20. Claims 26, 27, 34, 35 are rejected for the same rationale as in claims 6 and 7.
21. For claims 25 and 33, Burbeck-Krishnan-Teodosiu further discloses the content publisher peer node is a primary publisher of the particular content, and wherein the one of the other peer nodes is an edge publisher of the particular content (Burbeck, [0023], a primary publisher is a peer that originates the publishing of the instances, an edge

Art Unit: 2452

publisher is a peer that receives the instances advertised by the primary publisher and itself publishes the instances to other peers).

22. For claim 2, Burbeck-Krishnan further discloses wherein the at least a subset of the plurality of peer nodes are each configured to discover two or more advertisements published by two or more content publisher peer nodes to advertise a particular content cached on each of the two or more content publisher peer nodes (Burbeck, fig. 11, [0131], peer receives responses to content query from other peers that cached the content, [0023], the other peers that cached the content are content publishers publishing advertisements, [0118], propagating or broadcasting the content advertisement)

Burbeck does not disclose:

- determine one of the two or more content publisher peer nodes as logically nearest on the network, wherein a logically nearest peer node is a peer node to which communications over the network take the least time; and
- request the particular content from the logically nearest content publisher peer node in accordance with the advertisement corresponding to the logically nearest content publisher peer node.

However, Teodosiu discloses the same ([0047], choosing a closest content publisher in terms of network distance to the requesting node, [0033], best response time by network speed)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck-Krishnan and Teodosiu in order to

identify a closer content providing node that caches content so that content can be provided from the closer node in order to optimize network traffic (Teodosiu, [0047])

23. For claim 3, Burbeck-Krishnan-Teodosiu further discloses the at least a subset of the plurality of peer nodes are each further configured to cache the particular content and become an additional content publisher peer node for the particular network (Burbeck, [0023] lines 8-10, requesting node caches received content; [0118] lines 1-9, receiving peers further forwarding advertisement to other peers).

24. For claim 5, the claim is rejected as in claim 1. Burbeck-Krishnan further discloses wherein the at least a subset of the plurality of peer nodes are each configured to:

broadcast a request for a particular content on the network (Burbeck, fig. 11, user query for content resource or request content from its peers, [0127], broadcasting query);

receive a response to the request from each of two or more content publisher peer nodes that cache the particular content (Burbeck, [0125], [0131], identify peers satisfying the request and receive responses from these peers);

Burbeck does not explicitly disclose:

determine a logically nearest one of the two or more content publisher peer nodes on the network wherein a logically nearest peer node is a peer node to which

communications over the network take the least time; and get the content from the logically nearest content publisher peer node.

However, Teodosiu discloses the same (abstract, fig. 6 steps 615-640, [0098], determine a closest peer that has the content by selecting peers that has fastest data flow, and request content from the selected closest peers)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck, Krishnan and Teodosiu in order to provide peer-to-peer file sharing from the closest and fastest peers where the file is available for best quality of service.

25. For claims 21, and 29, the claims are rejected for the same rationale as in claim 2.

26. For claims 22, 23, 30 and 31, the claims are rejected for the same rationale as in claim 3.

27. For claim 8, Burbeck discloses a system, comprising:

A plurality of devices implementing a plurality of content publisher peer nodes coupled to a network, wherein each of the plurality of devices implements at least one peer node, and wherein each of the plurality of content publisher peer nodes is configured to cache user requestable contents and to publish the cached contents on the network ([0023], lines 1-3, a peer node publishes advertisements what content the node holds, content is requestable, [0043], peer devices);

a content consumer peer node coupled to the network and configured to send a request for a particular content on the network in response to a user request for the particular content ([0023] lines 4-8, a peer node requests for content based on received content advertisement, [0007], [0008], users download files); and

Burbeck does not explicitly disclose: a plurality of separately user-requestable contents;

However, Krishnan discloses the same (page 5, codats, or contents; advertisements, each advertisement message corresponds to a particular content)

Burbeck-Krishnan does not disclose: receive the particular content from a logically nearest content publisher peer node of the plurality of content publisher peer nodes on the network wherein a logically nearest peer node is a peer node to which communications over the network take the least time.

However, Teodosiu discloses the same (fig. 4, [0045]-[0047], in response to a peer requesting for resource, choosing a proximal content publisher from a plurality of publishers that cached the resource in terms of network topology, [0033], best response time or network speed)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck, Krishnan and Teodosiu in order to provide peer-to-peer file or content to a requesting peer from a closest publisher to optimize network traffic (Teodosiu, [0047]).

28. For claim 18, the claim is rejected for the same rationale as in claim 8.

Art Unit: 2452

29. For claim 9, the claim is rejected for the same rationale as in claim 1.
30. For claims 10 and 11, the claims are rejected for the same rationale as in claims 6 and 7.
31. For claim 19, the claim is rejected as in claim 18. Burbeck-Krishnan-Teodosiu further discloses means for the peer node to cache and publish the particular content for access by other peer nodes on the network (Burbeck, [0023], [0118], receiving peer node caches content and publishes to other peers).
32. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burbeck-Teodosiu, and further in view of Saulpaugh et al. (US 2004/0122903, hereafter Saulpaugh).

33. For claim 15, Burbeck-Teodosiu further discloses an edge peer node configured to: send a request for particular content on the network in response to a user request for the particular content (Burbeck, [0023], lines 4-5, request for content from requesting node, [0124], user entering request);

Burbeck-Teodosiu does not explicitly disclose receive a portion of the particular content from the primary content publisher peer node in response to the request; receive a redirection to the edge content publisher peer node from the primary content publisher peer node; and receive another portion of the particular content from the edge content publisher peer node in response to the redirection.

However, Saulpaugh discloses the same ([0076], a peer that receives a query for instances of a queried object may host one or more instances and know redirecting routes to remaining instances; so it responds to the query by returning the instances that it hosts together with routing information to other edges that host the remaining instances of that role).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck, Teodosiu and Saulpaugh in order to redirect content query to nodes that host portions of a queried object or content.

34. Claims 24 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burbeck-Krishnan-Teodosiu, and further in view of Saulpaugh.

35. For claim 24, Burbeck-Krishnan-Teodosiu further discloses an edge peer node configured to: send a request for particular content on the network in response to a user request for the particular content (Burbeck, [0023], lines 4-5, request for content from requesting node, [0124], user entering request);

Burbeck-Krishnan-Teodosiu does not explicitly disclose receive a portion of the particular content from the primary content publisher peer node in response to the request; receive a redirection to the edge content publisher peer node from the primary content publisher peer node; and receive another portion of the particular content from the edge content publisher peer node in response to the redirection.

However, Saulpaugh discloses the same ([0076], a peer that receives a query for instances of a queried object may host one or more instances and know redirecting

Art Unit: 2452

routes to remaining instances; so it responds to the query by returning the instances that it hosts together with routing information to other edges that host the remaining instances of that role).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck, Krishnan, Teodosiu and Saulpaugh in order to redirect content query to nodes that host portions of a queried object or content.

36. For claim 32, the claims are rejected for the same rationale as in claim 15.

37. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burbeck-Krishnan in view of Leber et al. (US 2003/0233455, hereafter Leber)

38. For claim 4, the claim is rejected as in claim 1. Burbeck-Krishnan further discloses wherein the at least a subset of the plurality of peer nodes are each configured to: send a request for the particular content on the network (Burbeck, [0023] lines 4-5, peers requesting for content);

Burbeck does not explicitly disclose receive a portion of the particular content from the first content publisher peer node that caches the particular content in response to the request; and receive another portion of the particular content from a second content publisher peer node that also caches the particular content in response to the request.

However, Leber discloses the same (abstract, requesting peers receive data portions back from the peers that have parts of a file, then reassemble the portions)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Burbeck, Krishnan and Leber in order to provide peer-to-peer file sharing from the peers where requested files or file parts are available as taught by Leber.

Conclusion

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HH

/DUYEN DOAN/

Examiner, Art Unit 2452